

1. ZARA

1635

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/544,776

DATE: 12/28/2000  
TIME: 08:21:55

Input Set : A:\471.app  
Output Set: N:\CRF3\12282000\I544776.raw

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```
4 <110> APPLICANT: Wei, Dong
5       Halenbeck, Robert
6       Williams, Lewis T.
8 <120> TITLE OF INVENTION: NOVEL PROTEIN ASSOCIATED WITH CELL
9       STRESS RESPONSE
11 <130> FILE REFERENCE: 200130.471/1561.003
13 <140> CURRENT APPLICATION NUMBER: 09/544,776
14 <141> CURRENT FILING DATE: 2000-04-07
16 <160> NUMBER OF SEQ ID NOS: 11
18 <170> SOFTWARE: FastSEQ for Windows Version 4.0
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 2240
22 <212> TYPE: DNA
23 <213> ORGANISM: Homo sapiens
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27 ccacaaccgc ccgcggctct gacacgcgc cccggcgccg ggggcagcag ctgcagcctc 120
28 atctccaccc tccagccatg gaagacctg accagttctc tctggtctcg tctcgggaca 180
29 gcccaccccg gcgcgagccc gcgttcaagt accagttcgt gaggagagccc gaggacgagg 240
30 aggaagaaga ggaggaggaa gaggaggacg aggaagaaag cctggaggag ctggaggtgc 300
31 tggagaggaa gccgcgcgc gggctgtccg cggcccaagt gcccacccgc cctgcgcgcg 360
32 gcgcgcgcct gatgacttc ggaatgact tctgcgcgc ggcgcgcgcg ggcgcgcgcg 420
33 cggcgcgcct cccgcgcgc cgggagcgcg agcgcgtctt ggcgcgcgcg cgggtgtcgt 480
34 cgaccgtgac ccgcgcgcct cgcgtgtctg ctgcgcgcgt ctgcgcgcct aagctccctg 540
35 aggaagacga gcctccgcgc cggcctcccc ctctccccc ggcgcgcgtg agcccccagg 600
36 cagagccctg gtgaccccg ccagcccccg ctccgcgcgc gcccctctcc accccggccg 660
37 cgcaccaagc caggggctcc tcgggctcag tgggtgttga cctctgttac tggagagaca 720
38 ttaagaagac tggagtgtg tttgggtcca gcctattcct gctgcttcca tlgacagtat 780
39 tcagcattgt gaggctaaac gcctacattg ccttgccctc gctctctgtg accatcagct 840
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41 gggcatatct ggaatctgaa gttgctatat ctgaggagtt ggttcagaag tacagtaatt 960
42 ctgctcttgg tcatgtgaac tgcaagataa aggaactcag gcgcctcttc ttagttgatg 1020
43 atttagttga ttctctgaag ttgcagtggt tgatgtgggt atttacctat gttggtgect 1080
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45 tttatgaacg gcatcaggca cagatagatc attatctagg acttgcaaat aagaatgtta 1200
46 aagatgctat ggtataaatc caagcaaaaa tccctggatt gaagcgcaaa gctgaatgaa 1260
47 aacgcccaca ataattagta ggagttcacc tttaaagggg atatttcattt gattatacgg 1320
48 gggagggtca ggaagaagc aaccttgacg ttgcagtgca gtttcacaga tctgtgttag 1380
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50 ttcacatctc taagtattgt aagctgctat gtatggattt aaaccgtaat catatcttct 1500
51 tccatctcga ggcactggtg gaataaaaaa cctgtatatt ttactttgtt gcagatagtc 1560
52 ttgcgcgcat ttggcaagtt gcagagatgg tggagctaga aaaaaaaaaa aaaaagccct 1620
53 tttcagtttg tgcactgtgt atggtccgtg tagattgatg cagattttct gaaatgaaat 1680
54 gtttgttttg acgagatcat accggtaaag cagggaatgac aaagcttgc tttctggtat 1740
55 gttctagggt tattgtgact ttactgttta tatlaattgc caalataagt aaatatagat 1800
56 tatatatgta tagtgtttta caaagcttag acctttacct tccagccacc ccacagtgtc 1860
57 tgatatltca gagtgcagtc ttggttatac atgtgtagtt ccaaaagcaca taagctagaa 1920
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58 gaagaaatat ttctaggagc actaccatct gttttcaaca tgaaatgcc a cacacataga 1980
59 actccaacaa catcaatttc attgcacaga ctgactgtag ttaattttgt cacagaatct 2040
60 atggactgaa tctaattgctt ccaaaaatgt tgtttgtttg caaatatcaa acattgttat 2100
61 gcaagaaatt attaattaca aaatgaagat ttataccatt gtggtttaag ctgtactaaa 2160
62 ctatatctgt ggaatgcatt gtgaactgta aaagcaaatg atcaataaag ctatatagact 2220
63 taataaaaaa aaaaaaa 2240
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66 <211> LENGTH: 373
67 <212> TYPE: PRT
68 <213> ORGANISM: Homo sapien
70 <400> SEQUENCE: 2
71 Met Glu Asp Leu Asp Gln Ser Pro Leu Val Ser Ser Ser Asp Ser Pro
72 1 5 10 15
73 Pro Arg Pro Gln Pro Ala Phe Lys Tyr Gln Phe Val Arg Glu Pro Glu
74 20 25 30
75 Asp Glu Glu Glu Glu Glu Glu Glu Glu Asp Glu Asp Glu Asp
76 35 40 45
77 Leu Glu Glu Leu Glu Val Leu Glu Arg Lys Pro Ala Ala Gly Leu Ser
78 50 55 60
79 Ala Ala Pro Val Pro Thr Ala Pro Ala Ala Gly Ala Pro Leu Met Asp
80 65 70 75 80
81 Phe Gly Asn Asp Phe Val Pro Pro Ala Pro Arg Gly Phe Leu Pro Ala
82 85 90 95
83 Ala Pro Pro Val Ala Pro Glu Arg Gln Pro Ser Trp Asp Pro Ser Pro
84 100 105 110
85 Val Ser Ser Thr Val Pro Ala Pro Ser Phe Leu Ser Ala Ala Val
86 115 120 125
87 Ser Pro Ser Lys Leu Pro Glu Asp Asp Glu Pro Pro Ala Arg Pro Pro
88 130 135 140
89 Pro Pro Pro Pro Ala Ser Val Ser Pro Gln Ala Glu Pro Val Trp Thr
90 145 150 155 160
91 Pro Pro Ala Pro Ala Pro Ala Ala Pro Pro Ser Thr Pro Ala Ala Pro
92 165 170 175
93 Lys Arg Arg Gly Ser Ser Gly Ser Val Val Val Asp Leu Leu Tyr Trp
94 180 185 190
95 Arg Asp Ile Lys Lys Thr Gly Val Val Phe Gly Ala Ser Leu Phe Leu
96 195 200 205
97 Leu Leu Ser Leu Thr Val Phe Ser Ile Val Ser Val Thr Ala Tyr Ile
98 210 215 220
99 Ala Leu Ala Leu Leu Ser Val Thr Ile Ser Pro Arg Ile Tyr Lys Gly
100 225 230 235 240
101 Val Ile Gln Ala Ile Gln Lys Ser Asp Glu Gly His Pro Phe Arg Ala
102 245 250 255
103 Tyr Leu Glu Ser Glu Val Ala Ile Ser Glu Glu Leu Val Gln Lys Tyr
104 260 265 270
105 Ser Asn Ser Ala Leu Gly His Val Asn Cys Thr Ile Lys Glu Leu Arg
106 275 280 285
107 Arg Leu Phe Leu Val Asp Asp Leu Val Asp Ser Leu Lys Phe Ala Val
108 290 295 300

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109 Leu Met Trp Val Phe Thr Tyr Val Gly Ala Leu Phe Asn Gly Leu Thr
110 305          310          315          320
111 Leu Leu Ile Leu Ala Leu Ile Ser Leu Phe Ser Val Pro Val Ile Tyr
112          325          330          335
113 Glu Arg His Gln Ala Gln Ile Asp His Tyr Leu Gly Leu Ala Asn Lys
114          340          345          350
115 Asn Val Lys Asp Ala Met Ala Lys Ile Gln Ala Lys Ile Pro Gly Leu
116          355          360          365
117 Lys Arg Lys Lys Ala Glu
118          370
120 <210> SEQ ID NO: 3
121 <211> LENGTH: 25
122 <212> TYPE: RNA
123 <213> ORGANISM: Artificial Sequence
125 <220> FEATURE:
126 <223> OTHER INFORMATION: Antisense oligonucleotide
128 <400> SEQUENCE: 3
129 cuggauagcu uggaucacac ccuug
131 <210> SEQ ID NO: 4
132 <211> LENGTH: 25
133 <212> TYPE: RNA
134 <213> ORGANISM: Artificial Sequence
136 <220> FEATURE:
137 <223> OTHER INFORMATION: Antisense oligonucleotide
139 <400> SEQUENCE: 4
140 caacuucagg auuccagaua ugccc
142 <210> SEQ ID NO: 5
143 <211> LENGTH: 24
144 <212> TYPE: RNA
145 <213> ORGANISM: Artificial Sequence
147 <220> FEATURE:
148 <223> OTHER INFORMATION: Antisense oligonucleotide
150 <400> SEQUENCE: 5
151 auuccaccag ugccucagau agga
153 <210> SEQ ID NO: 6
154 <211> LENGTH: 24
155 <212> TYPE: RNA
156 <213> ORGANISM: Artificial Sequence
158 <220> FEATURE:
159 <223> OTHER INFORMATION: Antisense oligonucleotide
161 <400> SEQUENCE: 6
162 augaucuau ucugccugau gccg
164 <210> SEQ ID NO: 7
165 <211> LENGTH: 356
166 <212> TYPE: PRT
167 <213> ORGANISM: Homo sapiens
169 <400> SEQUENCE: 7
170 Met Ala Ala Glu Asp Ala Leu Pro Ser Gly Tyr Val Ser Phe Gly His
171 1          5          10          15

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172 Val Gly Gly Pro Pro Pro Ser Pro Ala Ser Pro Ser Ile Gln Tyr Ser
173      20      25      30
174 Ile Leu Arg Glu Glu Arg Glu Ala Glu Leu Asp Ser Glu Leu Ile Ile
175      35      40      45
176 Glu Ser Cys Asp Ala Ser Ser Ala Ser Glu Glu Ser Pro Lys Arg Glu
177      50      55      60
178 Gln Asp Ser Pro Pro Met Lys Pro Ser Ala Leu Asp Ala Ile Arg Glu
179      65      70      75      80
180 Glu Thr Gly Val Arg Ala Glu Glu Arg Ala Pro Ser Arg Arg Gly Leu
181      85      90      95
182 Ala Glu Pro Gly Ser Phe Leu Asp Tyr Pro Ser Thr Glu Pro Gln Pro
183      100     105     110
184 Gly Pro Glu Leu Pro Pro Gly Asp Gly Ala Leu Glu Pro Glu Thr Pro
185      115     120     125
186 Met Leu Pro Arg Lys Pro Glu Glu Asp Ser Ser Ser Asn Gln Ser Pro
187      130     135     140
188 Ala Ala Thr Lys Gly Pro Gly Pro Leu Gly Pro Gly Ala Pro Pro Pro
189 145      150     155     160
190 Leu Leu Phe Leu Asn Lys Gln Lys Ala Ile Asp Leu Leu Tyr Trp Arg
191      165     170     175
192 Asp Ile Lys Gln Thr Gly Ile Val Phe Gly Ser Phe Leu Leu Leu Leu
193      180     185     190
194 Phe Ser Leu Thr Gln Phe Ser Val Val Ser Val Val Ala Tyr Leu Ala
195      195     200     205
196 Leu Ala Ala Leu Ser Ala Thr Ile Ser Phe Arg Ile Tyr Lys Ser Val
197      210     215     220
198 Leu Gln Ala Val Gln Lys Thr Asp Glu Gly His Pro Phe Lys Ala Tyr
199 225      230     235     240
200 Leu Glu Leu Glu Ile Thr Leu Ser Gln Glu Gln Ile Gln Lys Tyr Thr
201      245     250     255
202 Asp Cys Leu Gln Phe Tyr Val Asn Ser Thr Leu Lys Glu Leu Arg Arg
203      260     265     270
204 Leu Phe Leu Val Gln Asp Leu Val Asp Ser Leu Lys Phe Ala Val Leu
205      275     280     285
206 Met Trp Leu Leu Thr Tyr Val Gly Ala Leu Phe Asn Gly Leu Thr Leu
207      290     295     300
208 Leu Leu Met Ala Val Val Ser Met Phe Thr Leu Pro Val Val Tyr Val
209 305      310     315     320
210 Lys His Gln Ala Gln Ile Asp Gln Tyr Leu Gly Leu Val Arg Thr His
211      325     330     335
212 Ile Asn Ala Val Val Ala Lys Ile Gln Ala Lys Ile Pro Gly Ala Lys
213      340     345     350
214 Arg His Ala Glu
215      355
217 <210> SEQ ID NO: 8
218 <211> LENGTH: 371
219 <212> TYPE: PRT
220 <213> ORGANISM: Homo sapiens
222 <400> SEQUENCE: 8

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223 Met Glu Asp Leu Asp Gln Ser Pro Leu Val Ser Ser Ser Asp Ser Pro
224 1 5 10 15
225 Pro Arg Pro Gln Pro Ala Phe Lys Tyr Gln Phe Val Arg Glu Pro Glu
226 20 25 30
227 Asp Glu Glu Glu Glu Glu Glu Glu Asp Glu Asp Glu Asp
228 35 40 45
229 Leu Glu Glu Leu Glu Val Leu Glu Arg Lys Pro Ala Ala Gly Leu Ser
230 50 55 60
231 Ala Ala Pro Val Pro Thr Ala Pro Ala Ala Gly Ala Pro Leu Met Asp
232 65 70 75 80
233 Phe Gly Asn Asp Phe Val Pro Pro Ala Pro Arg Gly Pro Leu Pro Ala
234 85 90 95
235 Ala Pro Pro Val Ala Pro Glu Arg Gln Pro Ser Trp Asp Pro Ser Pro
236 100 105 110
237 Val Ser Ser Thr Val Pro Ala Pro Ser Pro Leu Ser Ala Ala Val
238 115 120 125
239 Ser Pro Ser Lys Leu Pro Glu Asp Asp Glu Pro Pro Ala Arg Pro Pro
240 130 135 140
241 Pro Pro Pro Pro Ala Ser Val Ser Pro Gln Ala Glu Pro Val Trp Thr
242 145 150 155 160
243 Pro Pro Ala Pro Ala Pro Ala Ala Pro Pro Ser Thr Pro Ala Ala Pro
244 165 170 175
245 Lys Arg Arg Gly Ser Ser Gly Ser Val Val Val Asp Leu Leu Tyr Trp
246 180 185 190
247 Arg Asp Ile Lys Lys Thr Gly Val Val Phe Gly Ala Ser Leu Phe Leu
248 195 200 205
249 Leu Leu Ser Leu Thr Val Phe Ser Ile Val Ser Val Thr Ala Tyr Ile
250 210 215 220
251 Ala Leu Ala Leu Leu Ser Val Thr Ile Ser Phe Arg Ile Tyr Lys Gly
252 225 230 235 240
253 Val Ile Gln Ala Ile Gln Lys Ser Asp Glu Gly His Pro Phe Arg Ala
254 245 250 255
255 Tyr Leu Glu Ser Glu Val Ala Ile Ser Glu Glu Leu Val Gln Lys Tyr
256 260 265 270
257 Ser Asn Ser Ala Leu Gly His Val Asn Cys Thr Ile Lys Glu Leu Arg
258 275 280 285
259 Arg Leu Phe Leu Val Asp Asp Leu Val Asp Ser Leu Lys Phe Ala Val
260 290 295 300
261 Leu Met Trp Val Phe Thr Tyr Val Gly Ala Leu Phe Asn Gly Leu Thr
262 305 310 315 320
263 Leu Leu Ile Leu Ala Leu Ile Ser Leu Phe Ser Val Pro Val Ile Tyr
264 325 330 335
265 Glu Arg His Gln Ala Gln Ile Asp His Tyr Leu Gly Leu Ala Asn Lys
266 340 345 350
267 Asn Val Lys Asp Ala Met Ala Lys Ile Gln Ala Lys Ile Pro Gly Leu
268 355 360 365
269 Lys Arg Lys
270 370
272 <210> SEQ ID NO: 9

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VERIFICATION SUMMARY

PATENT APPLICATION:- US/09/544,776

DATE: 12/28/2000

TIME: 08:21:56

Input Set : A:\471.app

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